

WHAT IS CLAIMED IS

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1. An apparatus for coding and decoding,
comprising:

a decoding unit which decodes compressed
and coded data to restore original image data;

10 a storing unit which stores additional
information other than the image data in memory; and

a coding unit which encodes at least a
portion of the additional information stored in said
memory as information additional to the image data
15 when performing second-time encoding of the image
data decoded by said decoding unit.

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2. The apparatus as claimed in claim 1,
further comprising an additional information
extracting unit which extracts the additional
information from the compressed and coded data when
25 the compressed and coded data is decoded, and said

storing unit stores the additional information
extracted by said additional information extracting
unit in said memory.

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3. The apparatus as claimed in claim 1,
wherein the additional information stored by said
10 storing unit is different from additional
information included in the compressed and coded
data.

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4. The apparatus as claimed in claim 3,
wherein the additional information stored by said
storing unit is a default setting.

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5. The apparatus as claimed in claim 3,
25 wherein the additional information stored by said

storing unit is additional information extracted from another compressed and coded data different than the compressed and coded data.

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6. The apparatus as claimed in claim 1, further comprising an additional information adding unit which provides new additional information to be encoded in addition to the additional information stored by said storing unit.

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7. The apparatus as claimed in claim 1, further comprising a selection unit which selects whether to encode the additional information when said coding unit performs the second-time encoding.

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8. The apparatus as claimed in claim 1,

wherein said decoding unit and said coding unit
comply with a JPEG format, and the additional
information stored by said storing unit is
information included in a COM marker of the JPEG
5 format.

10 9. The apparatus as claimed in claim 1,
wherein said decoding unit and said coding unit
comply with a JPEG2000 format, and the additional
information stored by said storing unit is
information included in a COM marker of the JPEG2000
15 format.

20 10. The apparatus as claimed in claim 1,
wherein said decoding unit and said coding unit
comply with a JPEG2000 format, and the additional
information stored by said storing unit is
information that falls within a defined marker range
25 of the JPEG2000 format, and that is not decipherable

by said decoding unit.

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11. The apparatus as claimed in claim 1,
wherein said decoding unit and said coding unit
comply with a JPEG2000 format, and the additional
information stored by said storing unit is
10 information included in a CRG marker of the JPEG2000
format.

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12. The apparatus as claimed in claim 1,
wherein said decoding unit and said coding unit
comply with a JPEG format, and the additional
information stored by said storing unit is
20 information included in a file format.

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13. The apparatus as claimed in claim 1,

wherein said decoding unit and said coding unit
comply with a JPEG2000 format, and the additional
information stored by said storing unit is
information included in a JP2 file format.

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14. The apparatus as claimed in claim 13,
10 wherein the additional information is information
included in an IPR box of the JP2 file format.

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15. The apparatus as claimed in claim 13,
wherein the additional information is information
included in an XML box of the JP2 file format.

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16. The apparatus as claimed in claim 13,
wherein the additional information is information
25 included in a UUID box of the JP2 file format.

5 17. The apparatus as claimed in claim 13,
wherein the additional information is information
included in a UUID info box of the JP2 file format.

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 18. A computer-readable record medium
having a program embodied therein for causing a
computer to perform coding and decoding, said
15 program comprising:

 a decoding unit which decodes compressed
and coded data to restore original image data;

 a storing unit which stores additional
information other than the image data in memory; and

20 a coding unit which encodes at least a
portion of the additional information stored in said
memory as information additional to the image data
when performing second-time encoding of the image
data decoded by said decoding unit.

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19. The computer-readable record medium as
5 claimed in claim 18, wherein said program further
comprises an additional information extracting unit
which extracts the additional information from the
compressed and coded data when the compressed and
coded data is decoded, and said storing unit stores
10 the additional information extracted by said
additional information extracting unit in said
memory.

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20. The computer-readable record medium as
claimed in claim 18, wherein the additional
information stored by said storing unit is different
20 from additional information included in the
compressed and coded data.

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21. The computer-readable record medium as claimed in claim 20, wherein the additional information stored by said storing unit is a default setting.

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22. The computer-readable record medium as claimed in claim 20, wherein the additional information stored by said storing unit is additional information extracted from another compressed and coded data different than the compressed and coded data.

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23. The computer-readable record medium as claimed in claim 18, wherein said program further comprises an additional information adding unit which provides new additional information to be encoded in addition to the additional information stored by said storing unit.

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24. The computer-readable record medium as
5 claimed in claim 18, wherein said program further
comprises a selection unit which selects whether to
encode the additional information when said coding
unit performs the second-time encoding.

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25. The computer-readable record medium as
claimed in claim 18, wherein said decoding unit and
15 said coding unit comply with a JPEG format, and the
additional information stored by said storing unit
is information included in a COM marker of the JPEG
format.

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26. The computer-readable record medium as
claimed in claim 18, wherein said decoding unit and
25 said coding unit comply with a JPEG2000 format, and

the additional information stored by said storing unit is information included in a COM marker of the JPEG2000 format.

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27. The computer-readable record medium as claimed in claim 18, wherein said decoding unit and said coding unit comply with a JPEG2000 format, and the additional information stored by said storing unit is information that falls within a defined marker range of the JPEG2000 format, and that is not decipherable by said decoding unit.

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28. The computer-readable record medium as claimed in claim 18, wherein said decoding unit and said coding unit comply with a JPEG2000 format, and the additional information stored by said storing unit is information included in a CRG marker of the JPEG2000 format.

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29. The computer-readable record medium as
5 claimed in claim 18, wherein said decoding unit and
said coding unit comply with a JPEG format, and the
additional information stored by said storing unit
is information included in a file format.

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30. The computer-readable record medium as
claimed in claim 18, wherein said decoding unit and
15 said coding unit comply with a JPEG2000 format, and
the additional information stored by said storing
unit is information included in a JP2 file format.

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31. The computer-readable record medium as
claimed in claim 30, wherein the additional
information is information included in an IPR box of
25 the JP2 file format.

5 32. The computer-readable record medium as
claimed in claim 30, wherein the additional
information is information included in an XML box of
the JP2 file format.

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 33. The computer-readable record medium as
claimed in claim 30, wherein the additional
15 information is information included in a UUID box of
the JP2 file format.

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 34. The computer-readable record medium as
claimed in claim 30, wherein the additional
information is information included in a UUID info
box of the JP2 file format.

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